CHENBRO

Storage Chassis
4-Port SAS / SATA-II Backplane

User's Manual

August / 31 / 2007

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Contents

Revision History

Revision	Date	Modifications
A0	Jan. / 02 / 2006	● First Release
A1	Aug. / 31 / 2007	● Update Wire Connection

Backplane Specification

Hardware Specification

Specification	
Host Interface	SATA-II
HDD Interface	SATA-II / SAS
Hot-Swap	Yes, allows user to replace HDD on line
Display	LED indicates HDD status (Defined by Chenbro) Power LED – Blue (When HDD is present) Access LED –Green (When HDD is busy) Error LED –Red (When HDD is error)
Cooling	Five Fan connector
Environment Monitoring	Temperature senor
Connectors	1. SATA 7pin x4 2. SAS 29pin x4 (for HDD) 3. Standard 4pin Power connector x 2 (+5V & +12V from power supply) 4. FPC x1 5. BOX HEADER x2
Dimension	419.79 (Width) x 26.2(Height) x 1.6 (Thickness) mm
Material	FR4 4layer

Accommodated Chassis

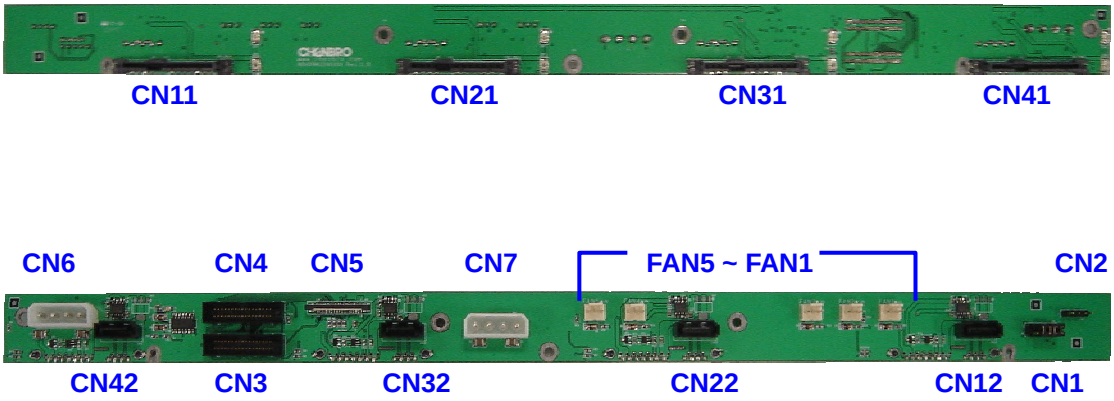
This backplane can be applied to the Storage Server Chassis as below:

- ***RM11704B***
- ***RM12404B***
- ***RM21508B***
- ***RM23212***
- ***RM31212B***
- ***RM41416B***
- ***RM51924B***
- ***RM51224B***

Backplane Layout

Backplane Connectors

Front view (HDD slot IN)



Rear View (Host Connector IN)

(1) [CN11 / CN21 / CN31 / CN41] : Connect to 22-pin SATA-II or 29-pin SAS HDD

(2) [CN5] : Signal connector (to LED board)

(3) [CN12 / CN22 / CN32 / CN42] : Connect to 7-pin SATA-II Host

(4) [FAN1 / FAN2 / FAN3 / FAN4 / FAN5] : 3-pin Fan connectors

(5) [CN3 / CN4] : Signal connector (Board to Board Connection)

(6) [CN6 / CN7] : 4-pin Power connectors

(9) [CN2] : HDD Failure LED Signal Pin Header

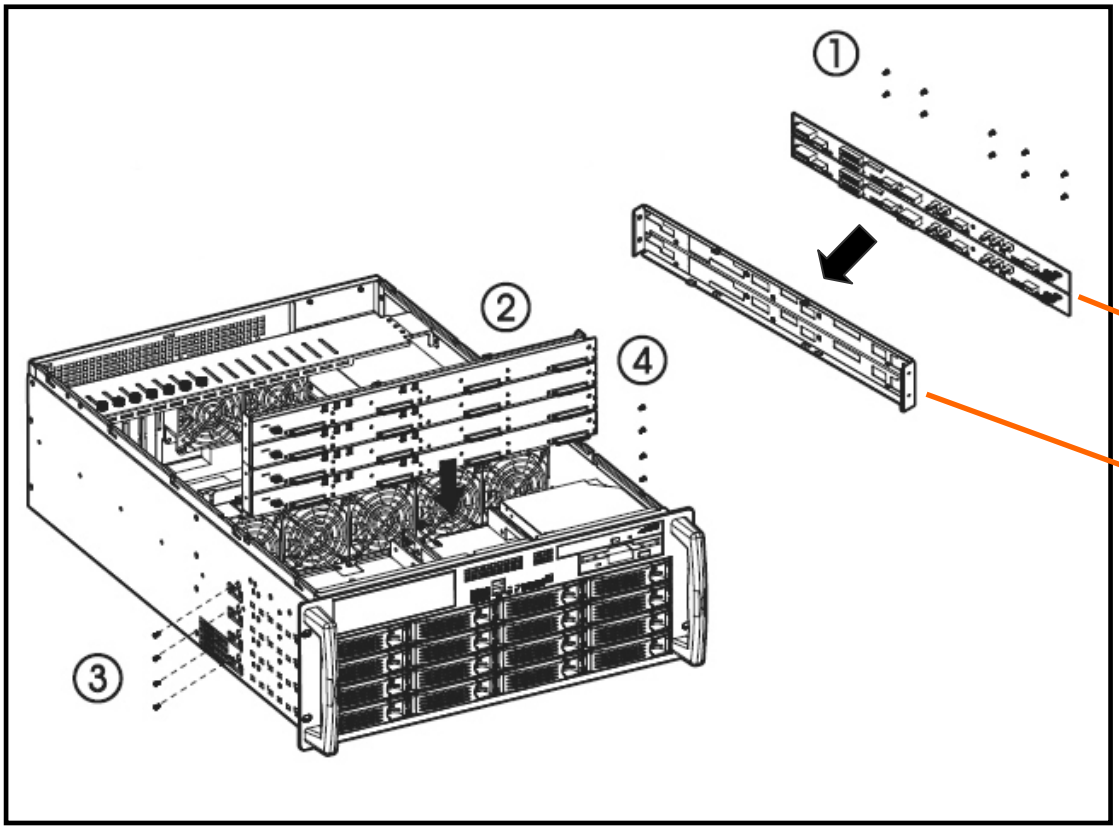
(10) [CN1] : HDD Access LED Signal Pin Header

Backplane Assembly

The Chenbro 4-Port SATA Backplane can be assembled on Chenbro Server Chassis RM11704B / RM12404B / RM21508B / RM23212 / RM31212B / RM41416B / RM51924B / RM51224B. Please refer to the Chassis Quick Installation Guide for the necessary information.

Example: Installing Backplane Assembly on RM41416B

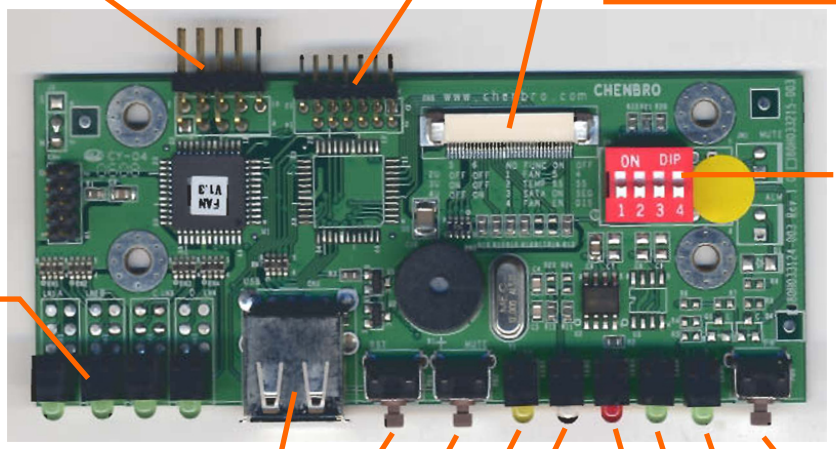
1. ***Attach 6 screws (4x M3 & 2x M2.5) to assemble backplane and bracket as one kit.***
2. ***Insert backplane kit into chassis alone the internal guide rail.***
3. ***Attach 4 screws to fix backplane kit both sides.***
4. ***Repeat step 1 to 3 for 2nd backplane kit assembly.***



LED Board Specification

1U LED Board

(Part Number 80H033124-003)



System signal connector to M/B

Backplane signal connector

USB 2.0 connector to M/B

Function Switch

HDD1~4 Activity LEDs

USB 2.0

Power Switch

System Reset Switch

Green LED On: LAN 2 Busy

Alarm Mute Switch

Green LED On: LAN 1 Busy

Yellow LED on: HDD busy

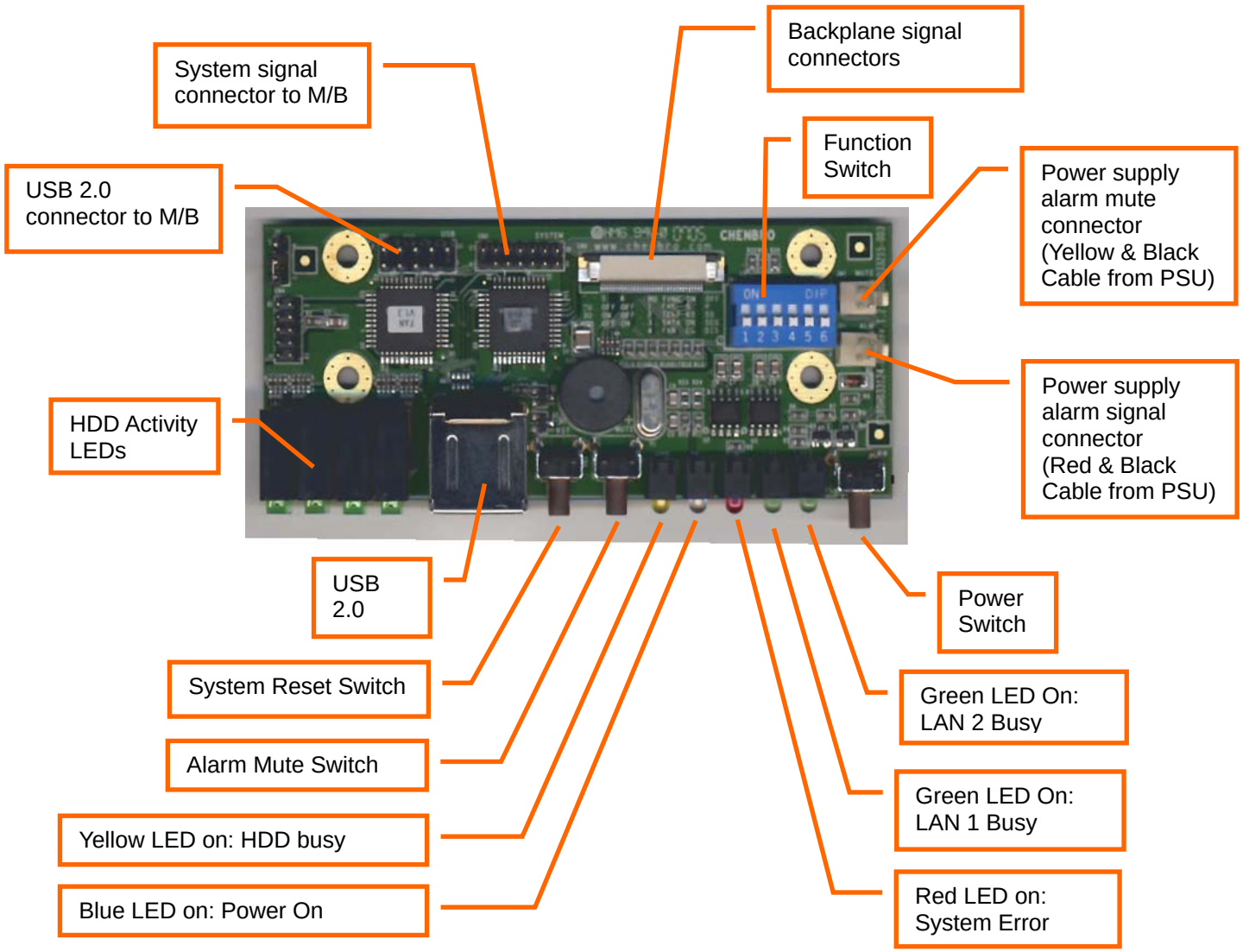
Red LED on: System Error

Blue LED on: Power On

Function Switch Pin Definition

	SW 1	SW 2	SW 3	SW 4
ON	Fan1~5 Enable	System Alarm Temperature is 65˚C	HDD Sequential Spin up Disable	Fan Monitoring Enable
OFF	Fan1~4 Enable	System Alarm Temperature is 55˚C	HDD Sequential Spin up Enable	Fan Monitoring Disable

2U~4U LED Board
(Part Number 80H033215-003)



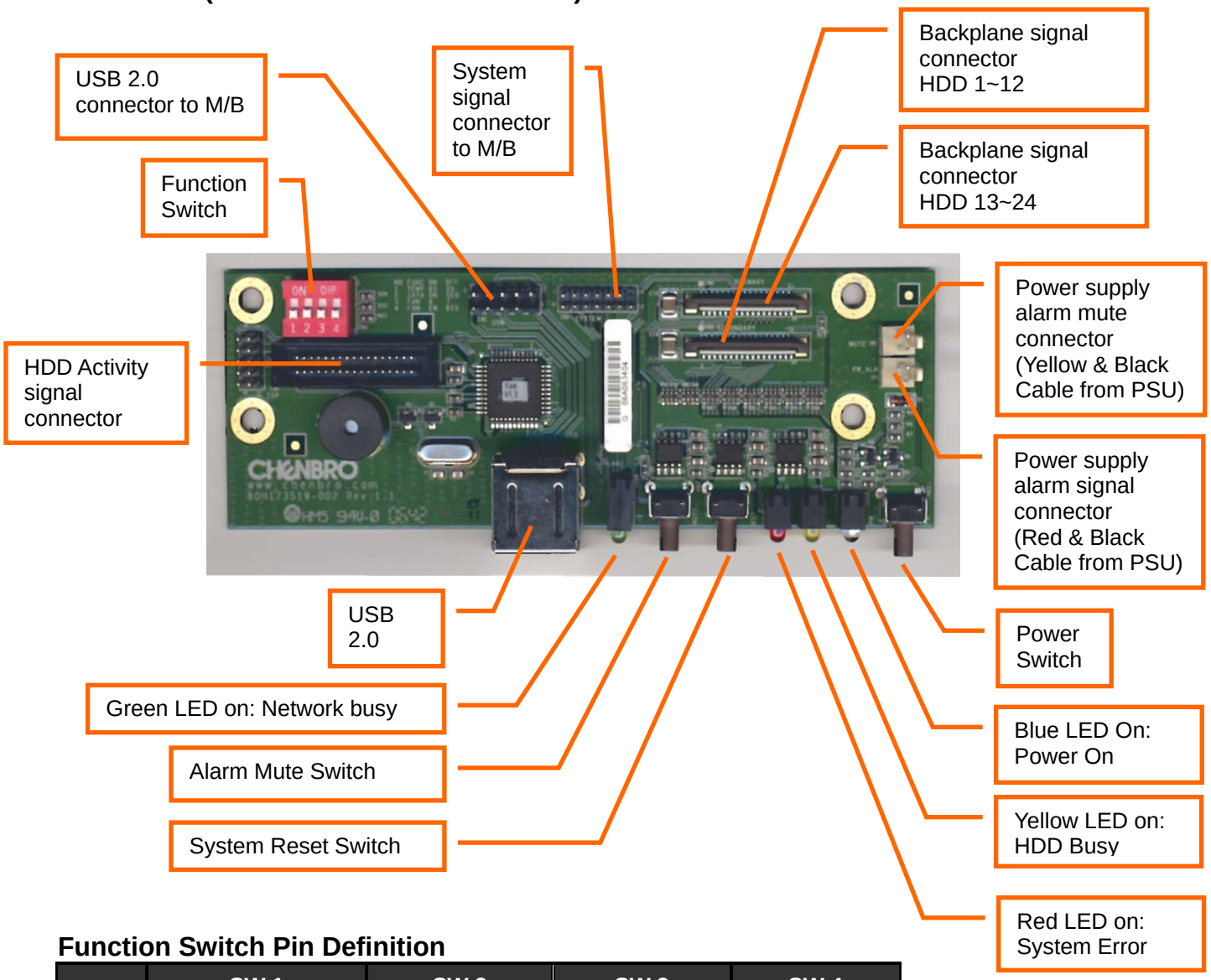
Function Switch Pin Definition

	SW 1	SW 2	SW 3	SW 4
ON	Fan1~5 Enable (RM41616B)	System Alarm Temperature is 65˚C	HDD Sequential Spin up Disable	Fan Monitoring Enable
OFF	Fan1~4 Enable (RM21508B & RM31212B)	System Alarm Temperature is 55˚C	HDD Sequential Spin up Enable	Fan Monitoring Disable

	SW 5	SW 6
8 HDDs	OFF	OFF
12 HDDs	ON	OFF
16 HDDs	OFF	ON

5U LED Board and Display Board

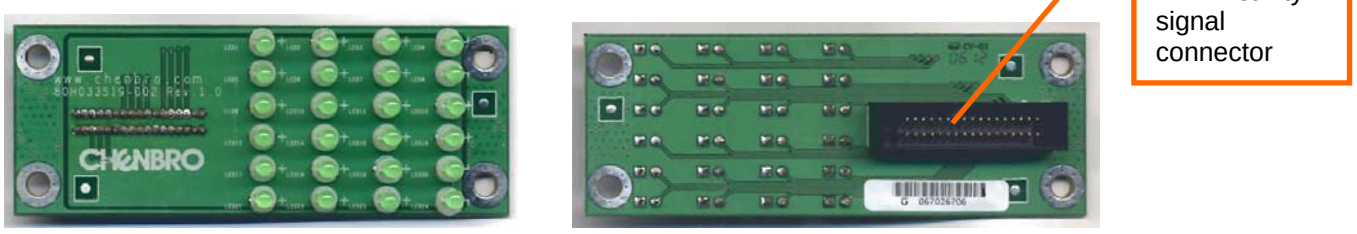
LED Board (Part Number 80H173519-002)



Function Switch Pin Definition

	SW 1	SW 2	SW 3	SW 4
ON	System Alarm Temperature is 65˚C	HDD Sequential Spin up Disable	Fan1~8 Enable (RM51924B)	Fan Monitoring Enable
OFF	System Alarm Temperature is 55˚C	HDD Sequential Spin up Enable	Fan1~7 Enable (RM51224B)	Fan Monitoring Disable

Display Board



Backplane Wiring

1. *Use 4 pcs of SATA-II cable per backplane for HOST to Backplane connection.*
2. *For the Fan connectors, connect the system middle Fan (3P3C) to the Backplane.*
3. *For the Fail LED output, connect the attached cable from RAID card (only if failure LED output is supported) to Backplane (CN2).*

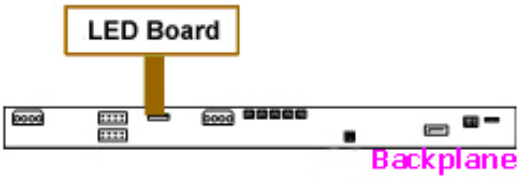
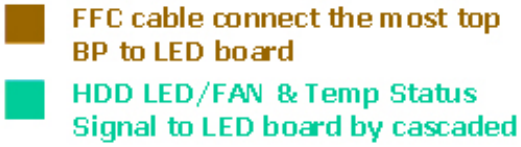


Fig-1: Wiring of SAS / SATA-II BP (1U)



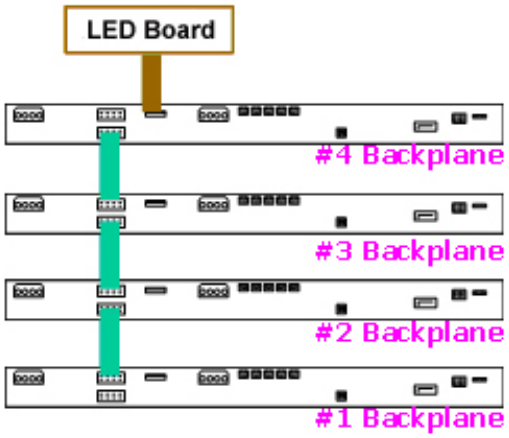


Fig-2: Wiring of SAS / SATA-II BP (2U~4U)

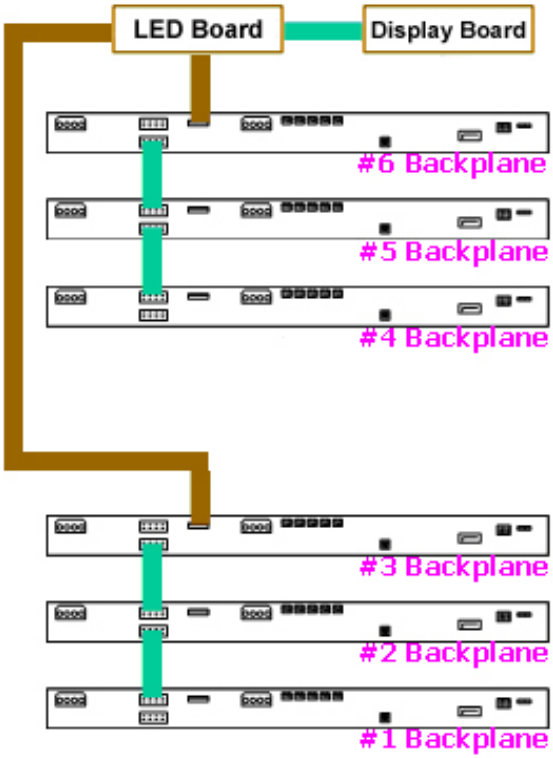
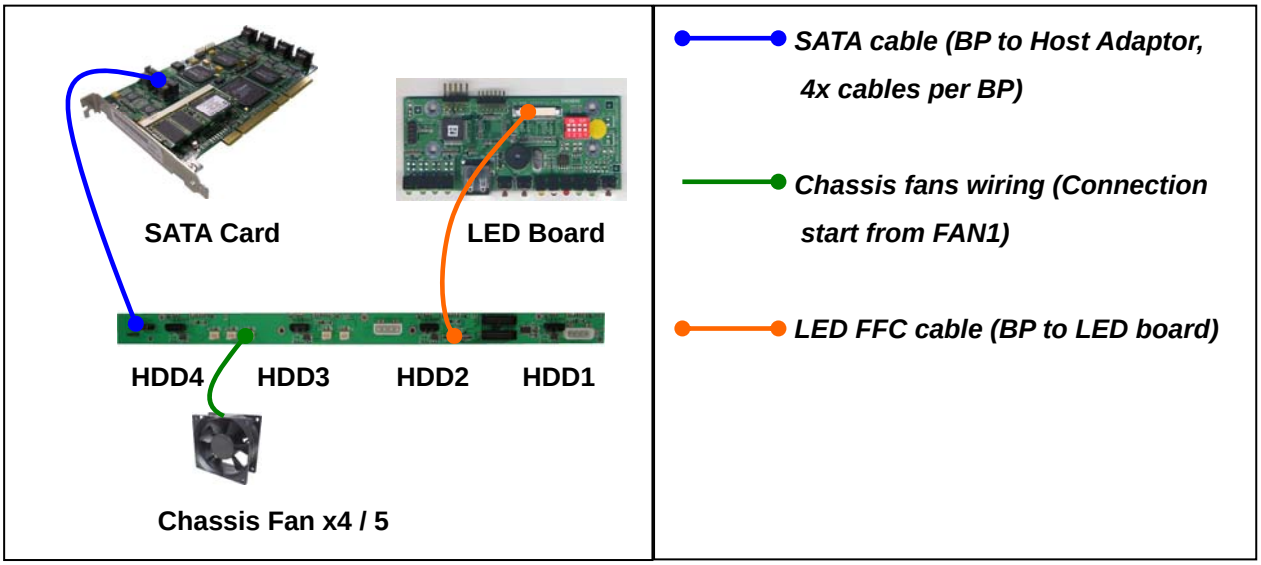


Fig-3: Wiring of SAS / SATA-II BP (5U)

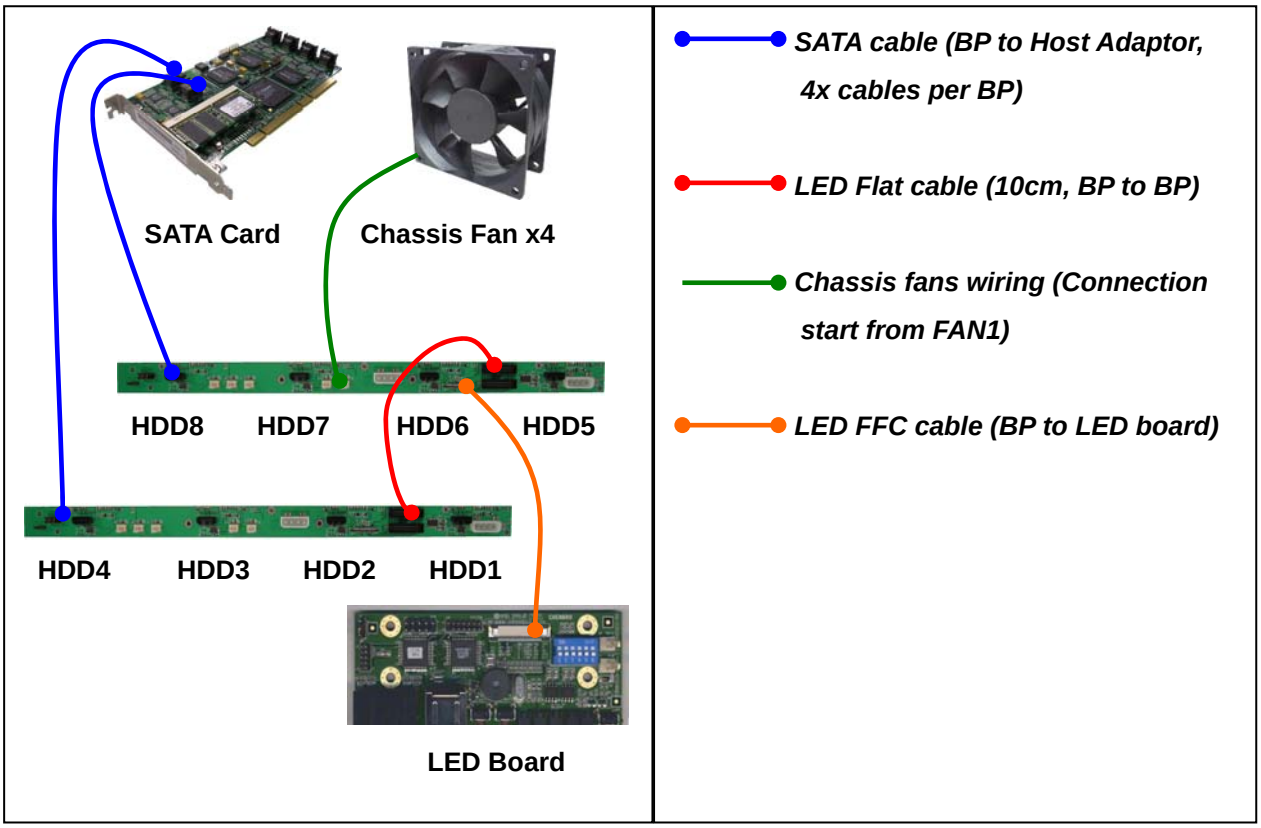
Chassis assembly example

See below for the example of how the wiring to be performed.

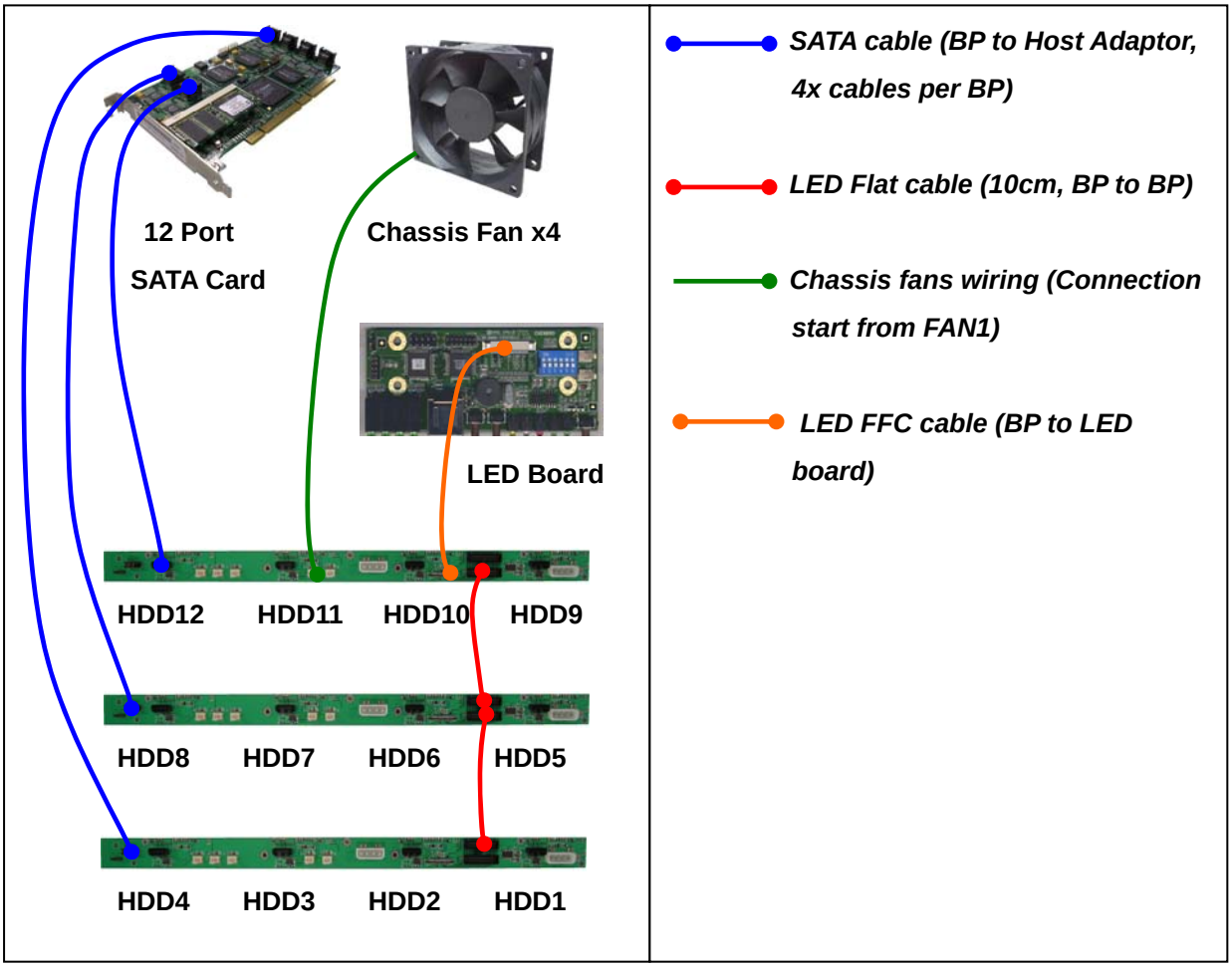
Example for 1U chassis SATA backplane wiring diagram (RM117 / RM124)



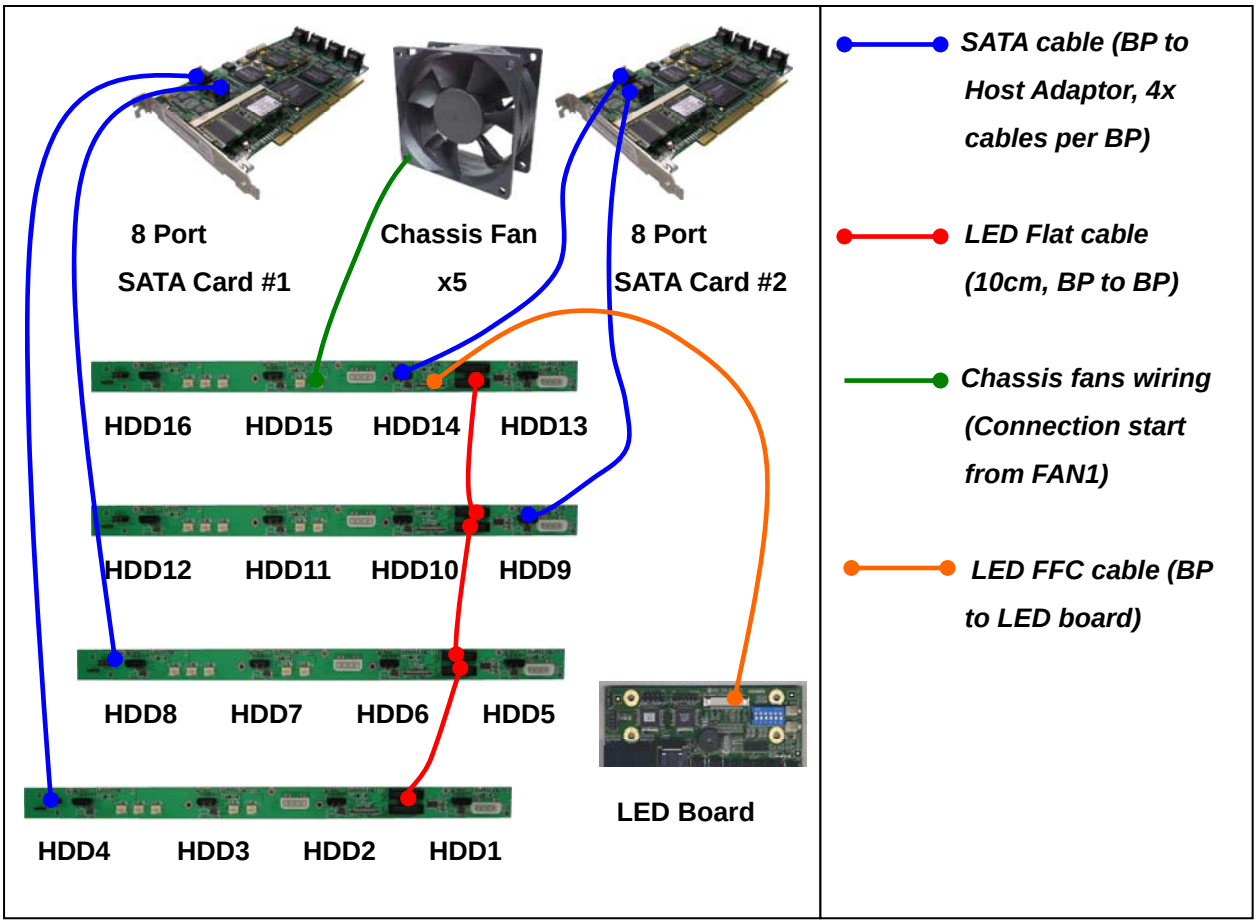
Example for 2U chassis SATA backplane wiring diagram (RM215)



Example for 3U chassis SATA backplane wiring diagram (RM312)



Example for 4U chassis SATA backplane wiring diagram (RM414)



Example for 5U chassis SATA backplane wiring diagram (RM519 / RM512)